

# NCDOT At A Crossroads

## North Carolina at a Crossroads: An Analysis of the Impact of Transportation on our State and Its Future

Bill Rosser, PE  
Director - Field Operations  
NCDOT Construction Engineers Conference  
March 21, 2006

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# NCDOT At A Crossroads



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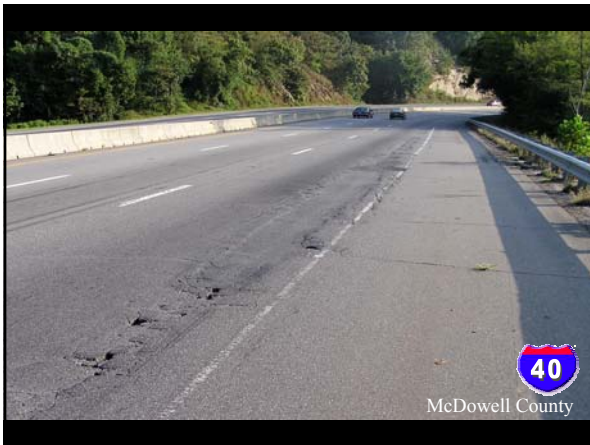
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# NCDOT At A Crossroads



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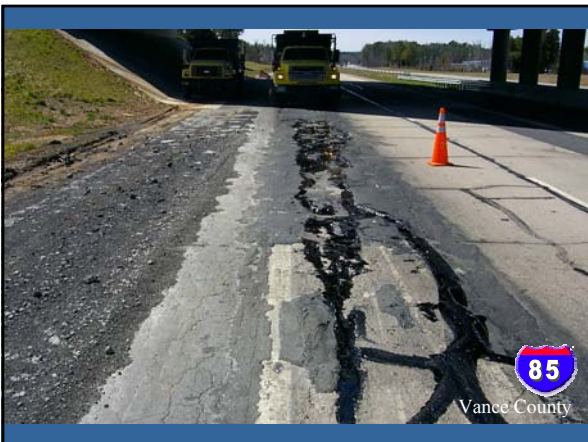
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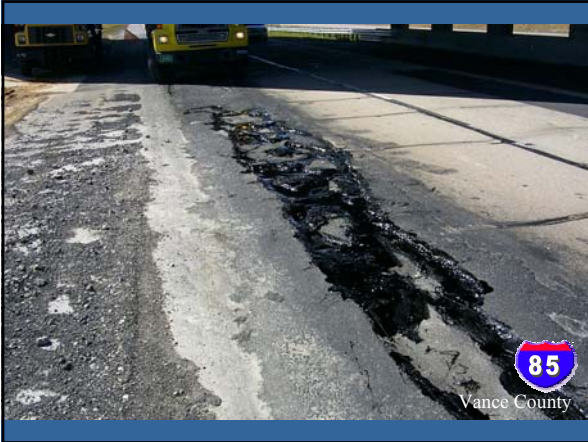
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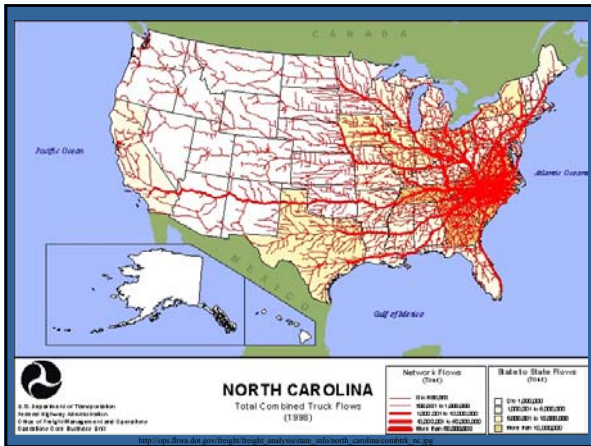
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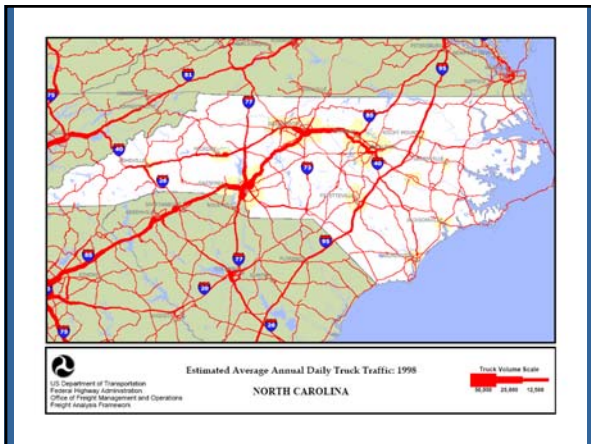
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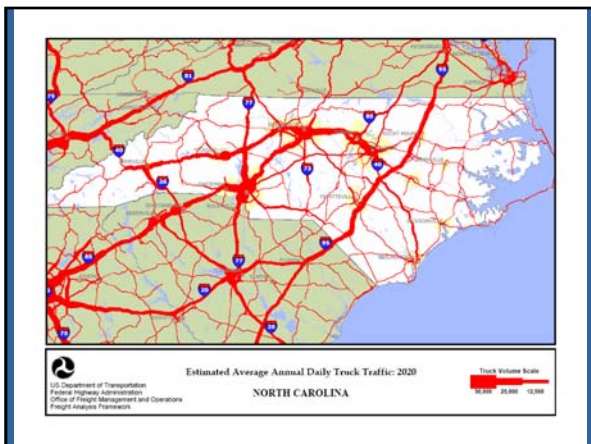
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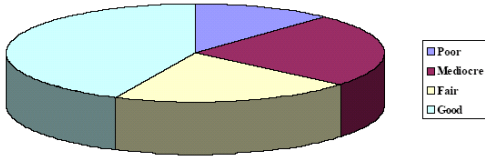
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# NCDOT At A Crossroads

Chart 4. Percentage of Miles of Major Roads in North Carolina in Poor, Mediocre, Fair and Good Condition, 2002



Source: TRIP analysis of Federal Highway Administration data

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Freight Shipments to, From, and Within North Carolina: 1998, 2010, 2020

NORTH CAROLINA	Tons (millions)			Value (billions \$)		
	1998	2010	2020	1998	2010	2020
State Total	511	756	944	426	820	1,324
By Mode						
Air	<1	1	2	29	72	126
Highway	426	641	808	381	719	1,152
Other*	1	3	4	<1	<1	1
Rail	79	104	121	15	26	41
Water	5	7	9	1	2	3
By Destination/Market						
Domestic	493	726	900	392	748	1,189
International	18	30	44	34	72	134

Note: Modal numbers may not add to totals due to rounding.

\*The "Other" category includes international shipments that moved via pipeline or by an unspecified mode.

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## North Carolina State Highway System System Responsibility

- | 1989                            | 2004                           |
|---------------------------------|--------------------------------|
| • 76,808 road miles             | • 78,615 road miles            |
| • 127,809 paved lane miles      | • 158,592 paved lane miles     |
| • 16,104 miles of unpaved roads | • 6,644 miles of unpaved roads |
| • 16,900 structures             | • 17,756 structures            |
| • 61.1 M sf bridge deck area    | • 78.8 M sf bridge deck area   |

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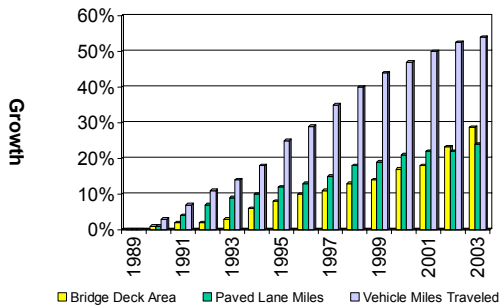
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# NCDOT At A Crossroads

## Highway System Growth & Usage

(Vehicle Mi. Traveled/Paved LM/Bridge Deck Area)



## Statewide Transportation Plan



## Statewide Transportation Plan

- Recommended Investment Scenario
  - Underscores importance of Safety in all investments
  - 75% of Maintenance & Preservation needs met
    - represents a 10% increase from past
  - Major Modernization emphasis (2/3 of needs met)
    - represents a 25% increase from past
  - 2/3 of Highway Expansion needs met
  - Increases investment for non-highway modes

# NCDOT At A Crossroads

## Tiered Approach



- **Statewide Tier** - Facilities such as Interstates and major Primary Highways which serve long-distance trips, connect major population centers, have the highest usage and primarily provide a mobility function.
- **Regional Tier** - Minor US and NC designated highways which connect regional centers and typically serve high levels of demand for short distance like commuter travel.
- **Subregional Tier** - Minor NC routes and Secondary Roads which serve localized, short distance movements, have low demand, and provide land access to homes and businesses.

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## Tiered Approach Example



### KEY PERFORMANCE MEASURES

TIER	PCR	MCA	BR RATING	SIGNAL PM'S
Statewide	90	LOS B	8.0	100%
Regional	82	LOS C	7.5	90 %
Subregional	82	LOS C	7.0	80%

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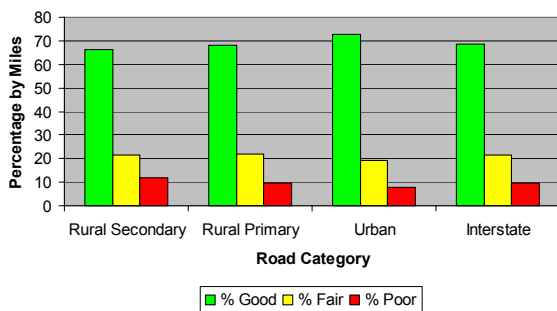
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Good-Fair-Poor by System




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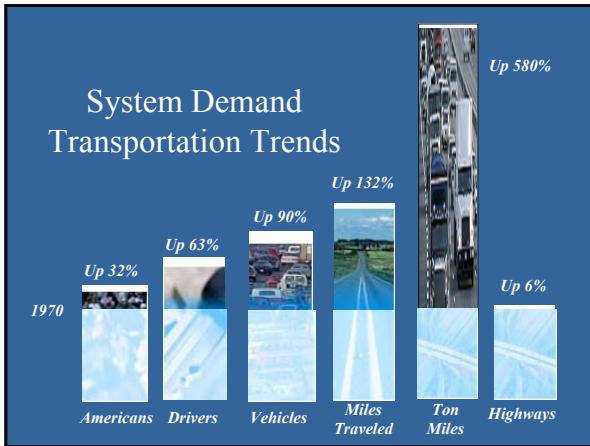
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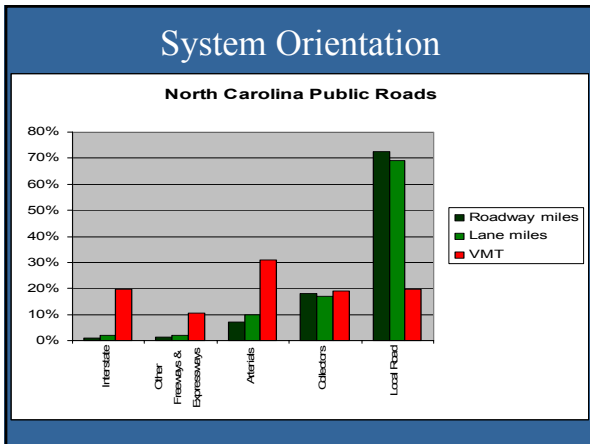
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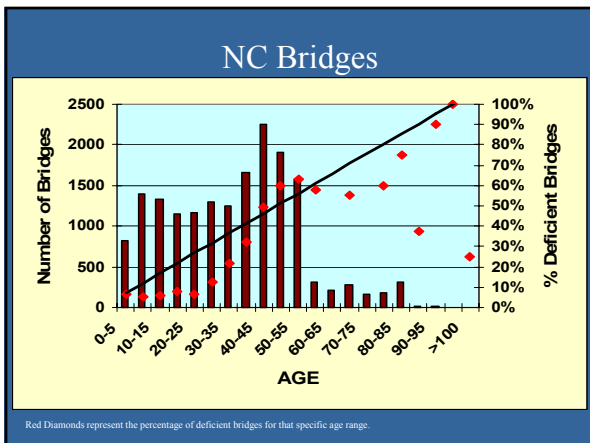
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# NCDOT At A Crossroads

Current Interstate Roughness			
Route	IRI (inches/mile)		
	Left Wheelpath	Right Wheelpath	Average
I-26	95.46	55.54	75.5
I-40	106.42	103.81	105.12
I-77	108.93	94.15	101.54
I-85	123.05	112.47	117.76
I-95	101.08	105.87	103.47
Statewide	109.02	104.7	106.86

Please note that results are based on roughly 50% of the actual interstate mileage.  
This is all of the available current data from 2003, 2004 and 2005

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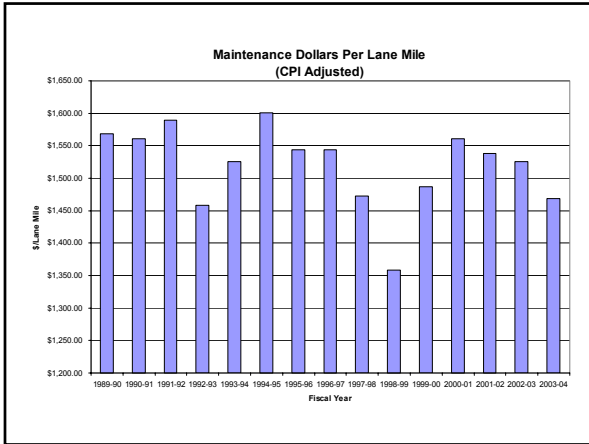
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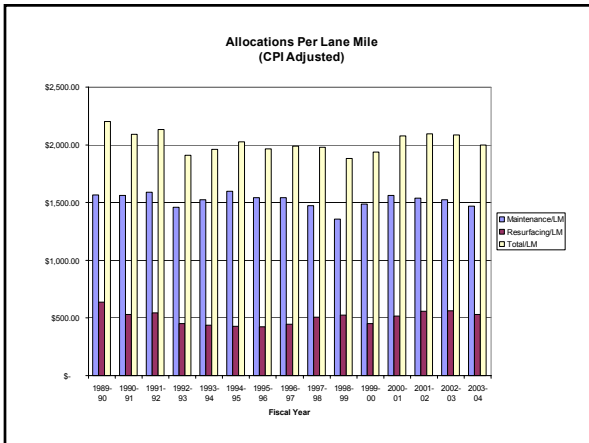
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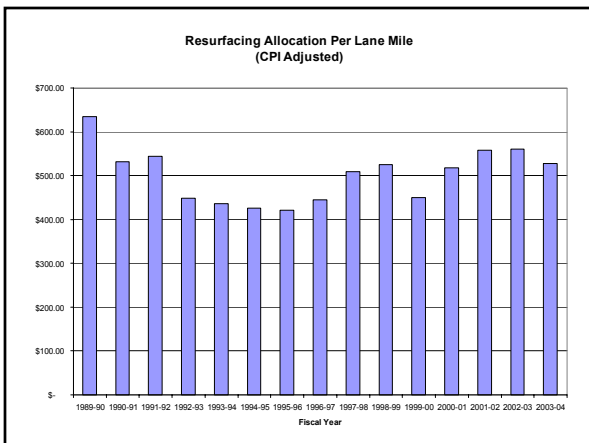
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